

IN THE CLAIMS:

Claims 1-20 Canceled.

21. (New) A system for discovering and maintaining geographic location information for network sites, the system comprising:

a portable computing unit having a location discovery entity, a message generator configured to generate network messages, and a communication facility for transmitting the network messages onto a computer network; and

a location generator configured and arranged to determine physical coordinates for its current location, the location generator coupled to the computing unit for providing physical coordinates thereto;

whereby,

the discovery entity and the message generator cooperate to acquire physical coordinates from the location generator for a given network site, and to load the acquired physical coordinates into one or more network messages, and

the communication facility transmits the one or more network messages containing the physical coordinates to a designated network entity.

22. (New) The system of claim 21 wherein

the location generator includes a Global Positioning System (GPS) receiver for determining physical coordinates.

23. (New) The system of claim 22 wherein

the location generator further includes an inertial navigation unit configured to produce signals responsive to the unit being moved, the inertial navigation unit coupled to the portable computing unit for providing the inertial navigation signals thereto, and

the discovery entity is configured to integrate the inertial navigation signals with physical coordinates acquired by the GPS receiver for a substitute location to produce physical coordinates for the given network site.

24. (New) The system of claim 21 further comprising one or more antenna coupled to the location discovery entity of the portable computing unit, the one or more antenna configured to receive radio signals from a plurality of transmitting base stations, wherein

the radio signals are encoded with the physical coordinates of the respective base station, and

the location discovery entity is configured to compute the physical coordinates for its current location based on the received radio signals.

25. (New) The system of claim 24 wherein the location discovery entity employs triangulation techniques to compute the physical coordinates for its current location.

26. (New) The system of claim 24 wherein the radio signals are Ultra Wideband (UWB) radio signals.

27. (New). The system of claim 21 wherein the given network site corresponds to a Voice over Internet Protocol (VoIP) phone.

28. (New) A method for discovering and maintaining location information of a plurality of network entities forming a computer network, the method comprising the steps of:

utilizing a Global Positioning System (GPS) unit to derive physical coordinates of a location associated with a first network entity of the computer network;

generating one or more network messages containing the physical coordinates derived for the first network entity; and

sending the one or more network messages containing the physical coordinates to a second network entity of the computer network, whereby the second network entity associates the physical coordinates with the first network entity.

29. (New) A storage medium containing program instructions executable by a processing element for associating physical location information with one or more network messages originating from a source entity, the one or more network messages being directed to a destination entity, the program instructions comprising program instructions for:

- receiving physical coordinates of the location of the source entity;
- storing the physical coordinates received for the source entity;
- receiving the one or more network messages originating from the source entity;
- forwarding the one or more network messages toward the destination entity; and
- sending the physical coordinates received for the source entity to the destination entity.

30. (New) The storage medium of claim 29 wherein the program instructions for sending comprise program instructions for appending the physical coordinates to at least one of the one or more network messages originating from the source entity.

31. (New) The storage medium of claim 29 wherein the program instructions for sending comprise program instructions for:

- generating one or more network messages that are separate from the network messages originating from the source entity;
- loading the physical coordinates into the one or more separate network messages;
- and
- sending the one or more separate network messages to the destination entity.

32. (New) The storage medium of claim 29 wherein

the source entity is a Voice over Internet Protocol (VoIP) phone, and
the one or more network messages correspond to an emergency call from the
VoIP phone.

33. (New) The storage medium of claim 32 wherein the destination entity corresponds to a Public Safety Answering Point (PSAP).

34. (New) The storage medium of claim 29 wherein
the program instructions are executed by a network switch having a memory, and
the physical coordinates are stored in the memory of the network switch.

35. (New) A system for discovering and maintaining geographic location information for network sites, the system comprising:

means for generating physical coordinates corresponding to the location of a first network entity;

means for loading the physical coordinates generated for the first network entity into one or more network messages; and

means for sending the one or more network messages to a selected intermediate network device for storage thereby.

36. (New) The system of claim 35 wherein the generating means utilizes at least one of a plurality of Global Positioning System (GPS) signals and an inertial navigation unit to generate the physical coordinates.

37. (New) The system of claim 35 wherein the network sites correspond to the network entities of a computer network disposed within an office.

38. (New) The system of claim 37 wherein the network entities include one or more of Voice over Internet Protocol (VoIP) phones, personal computers, servers and intermediate network devices.

39. (New) The system of claim 35 wherein
the selected intermediate network device has a plurality of ports,
the physical coordinates generated for the first network entity are received on a given port,
the intermediate network device associates the received physical coordinates with the given port.

40. (New) The system of claim 39 wherein the received physical coordinates are bound to the given port.